

Appl. No.: 10/773,489
Amdt. dated 12/21/2005
Reply to Office action of October 20, 2005

Amendments to the Claims:

1. (currently amended) An apparatus for beveling an edge of a workpiece as the workpiece is advanced along a linear path of travel, and comprising

a motor assembly which includes a cutting wheel,
means mounting the motor assembly adjacent one side of the path of travel with the cutting wheel contacting the edge of the advancing workpiece and so as to permit floating movement of the motor assembly in a predetermined direction toward and away from the edge of the workpiece as the workpiece is advanced along the path of travel, and

a guide shoe fixed to the motor assembly and positioned to ride on the advancing workpiece and so that the guide shoe and the cutting wheel follow the contour of the edge of the advancing workpiece and thereby cause a uniform bevel to be formed along the edge of the advancing workpiece,

wherein the linear path of travel of the advancing workpiece is horizontal, wherein said predetermined direction of the floating movement of the motor assembly is substantially perpendicular to said horizontal path of travel, and

wherein the means mounting the motor assembly comprises a linear slide assembly which includes a fixed frame member and a slide housing mounted to the frame member, with the slide housing supporting a slide for limited movement against a spring biasing force both toward and away from the edge of the workpiece along said predetermined direction, and with the slide being fixedly connected to said motor assembly.

2.-3. (cancelled)

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4. (currently amended) The apparatus of Claim 1 [[3]] wherein the linear slide assembly further includes an adjustment screw interconnected between the fixed frame member and the slide housing whereby rotation of the screw causes the slide housing to move toward or away from the edge of the workpiece along said predetermined direction and thereby permit the manual adjustment of the position of the cutting wheel with respect to the advancing workpiece.

5. (currently amended) An apparatus for beveling an edge of a workpiece as the workpiece is advanced along a linear path of travel, and comprising

a motor assembly which includes a cutting wheel,
means mounting the motor assembly adjacent one side of the path of travel with the cutting wheel contacting the edge of the advancing workpiece and so as to permit floating movement of the motor assembly in a horizontal first direction toward and away from the edge of the workpiece as the workpiece is advanced along the path of travel, and to permit separate floating movement of the motor assembly in a vertical second direction toward and away from the edge of the workpiece as the workpiece is advanced along the path of travel, and

a guide shoe fixed to the motor assembly and positioned to ride on the advancing workpiece and so that the guide shoe and the cutting wheel follow the contour of the edge of the advancing workpiece and thereby cause a uniform bevel to be formed along the edge of the advancing workpiece,

wherein the means mounting the motor assembly is configured to permit manual adjustment of the motor assembly toward and away from the workpiece along the first direction,

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and to permit separate manual adjustment of the motor assembly up and down along the second direction, and

wherein the guide shoe includes a first contact surface which is positioned to engage the top surface of the advancing workpiece, and a second contact surface which is positioned to engage the side edge of the advancing workpiece.

7. (cancelled)

8. (currently amended) The apparatus of Claim 5 [[7]] wherein the guide shoe is mounted to the motor assembly so as to permit manual adjustment of the guide shoe toward and away from the cutting wheel along the first direction.

9. (original) The apparatus of Claim 8 wherein the first contact surface is positioned axially beyond a plane defined by the cutting wheel, and the second contact surface is substantially parallel to said plane and positioned axially inside of said plane.

10. (original) The apparatus of Claim 5 wherein the motor assembly further comprises a horizontal support plate and an electric motor mounted upon said support plate and connected to rotate a drive shaft about its axis, with said drive shaft mounting said cutting wheel, and wherein said means mounting the motor assembly so as to permit floating movement in the first direction comprises a first linear slide assembly which includes a fixed frame member and a slide housing mounted to the frame member, with the slide housing supporting a slide for limited movement against a spring biasing force toward and away from the edge of the workpiece along said first direction.

11. (original) The apparatus of claim 10 wherein said means mounting the motor assembly so as to permit separate floating movement in the vertical second direction comprises a second linear slide assembly which includes a fixed frame member and a slide housing mounted to the frame member, with the slide housing supporting a slide for limited movement against a spring biasing force toward and away from the edge of the workpiece along said second direction.

12. (original) The apparatus of Claim 11 wherein the slide housing of the first linear slide assembly is mounted to the fixed frame member by means of a threaded screw which permits the slide housing to be adjustably positioned along the first direction, and wherein the slide housing of the second linear slide assembly is mounted to the fixed frame member thereof by means of a threaded screw which permits the slide housing to be adjustably positioned along the second direction.

13. (original) The apparatus of Claim 12 wherein said means mounting the motor assembly so as to permit movement in the vertical second direction further comprises a third linear slide assembly which has a structure substantially identical to that of said second linear slide assembly, with the second and third linear slide assemblies being positioned on respective opposite sides of the motor assembly, and wherein the adjusting screws of the second and third linear slide assemblies are rotatably interconnected for concurrent rotation.

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14. (original) An apparatus for beveling an edge of each of a plurality of serially advancing workpieces, comprising

a conveyor for serially advancing the workpieces along a horizontal linear path of travel,

a motor assembly which includes a support plate, an electric motor mounted upon said support plate, and a drive shaft connected to the motor and extending in a generally horizontal direction which is generally perpendicular to said path of travel, and a cutting wheel mounted to said drive shaft so as to rotate in a plane which is generally parallel to said path of travel,

means mounting the motor assembly adjacent one side of the conveyor with the cutting wheel contacting an edge of each advancing workpiece, said mounting means being configured to permit manual adjustment of the motor assembly toward and away from the path of travel along a first direction which is substantially parallel to the axis of the rotatable drive shaft, and to permit separate manual adjustment of the motor assembly up and down along a second direction which is substantially vertical, and said means mounting the motor assembly further comprising means permitting the motor assembly and thus the cutting wheel to float toward and away from the workpiece along the first direction and to float up and down along the second direction after being manually adjusted in both the first and second directions, and

a guide shoe fixed to the motor assembly and positioned to ride on each advancing workpiece and so that the guide shoe and the cutting wheel follow the contour of the edge of each advancing workpiece and thereby cause a uniform bevel to be formed along the edge of each advancing workpiece.

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15. (original) The apparatus of Claim 14 wherein the apparatus further comprises

a second motor assembly which includes a support plate, an electric motor mounted upon said support plate, and a drive shaft connected to the motor and extending in a generally horizontal direction which is generally perpendicular to said path of travel, and a cutting wheel mounted to said drive shaft so as to rotate in a plane which is generally parallel to said path of travel,

means mounting the second motor assembly adjacent the conveyor on the side thereof opposite the first mentioned motor assembly, with the cutting wheel of the second motor assembly contacting an edge of each advancing workpiece which is opposite to the edge contacted by the cutting wheel of the first mentioned motor assembly, said mounting means configured to permit manual adjustment of the second motor assembly toward and away from the path of travel along a first direction which is substantially parallel to the axis of the rotatable drive shaft, and to permit separate manual adjustment of the motor assembly up and down along a second direction which is substantially vertical, and said means mounting the motor assembly further comprising means permitting the motor assembly and thus the cutting wheel to float toward and away from the workpiece along the first direction, and to float up and down along the second direction after being manually adjusted in both the first and second directions, and

a second guide shoe fixed to the second motor assembly and positioned to ride on each advancing workpiece and so that the second guide shoe and the cutting wheel of the second motor assembly follow the contour of the edge of each

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advancing workpiece and thereby cause a uniform bevel to be formed along the edge of each advancing workpiece.